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ADHESIVELY-BONDED DOUBLY SECURED INSULATED GLAZING UNIT

Gluing glazing panels on the outside of frames has numerous advantages: the absence of thermal bridges, greater cutting tolerances, esthetics.

The gluing technique in known system has the drawback of being completely dependent upon only one adhesively bonded surface. Moreover, in addition to being glued to one single surface of the glazing unit, these systems comprise mechanical fasteners on the frame, which detract from he esthetic appearance.

The present invention allows the glazing unit to be doubly-secured and the mechanical fasteners will be eliminated from insulating glazing unit which comprises:

- a section *A* having a re-entering angle the panel from the outside surface of the frame forms a recess *B*;

- a double glazing unit comprising two window panes C1 and C2, with the outside window pane C1 having the outside dimensions of the frame which is made up of section *A*, with the inside glazing panel C2 having smaller dimensions than those of glazing panel C1, and this allows the same to be embedded in the surface delimited by the recess

B of the frame, which is made of section A, and with the depth of this recess being equal to the sum of the thickness of the inside wall C2 of the double glazing unit, and with the thickness of the separating joint E2 arranged between the two double-glazing panes and connecting the latter together by adhesive bonding.

- Three gluing joints situated, respectively, between the outside window pane C1 and the outside face D1 of the frame; between the outside window pane C1 and the inside window pane C2; between the inside window pane C2 and the face D2 of the frame at the bottom of the recess, with the joints being E1, E2, E3.

The operation of this type of system ensures that it is doubly secured as desired: in case of breakage of E1, the entire assembly is supported by E2 and E3. In case of breakage of E2, support of C1 is ensured by E1, and that of C2 by E2. In case of breakage of E3, the support of C1 and C2 is ensured by E1.

This doubly-secured arrangement allows mechanical fasteners to be eliminated because failure of one of the three adhesive bonds will not cause failure of the entire assembly or one of the elements of the glazing unit.

CLAIMS

1. Double insulating glued glazing unit which ensures secure attachment in case of total failure of the adhesive on one of the adhesive planes, characterized in that each window pane is directly glued to the frame, with the window panes being connected to one another by adhesive bonding.

2. System as defined in Claim 1, characterized in that the dimension of the inside window pane is smaller than that of the outside window pane.

3. System as defined in Claims 1 and 2, characterized in that the section comprising the frame is provided with a recess, which allows the inside window pane to be embedded in the volume of the chassis.

4. System as defined in Claim 3, characterized in that the depth of the recess is equal to the thickness of the inside wall of the double glazing unit increased by the thickness of the separating joint arranged between the two window panes.

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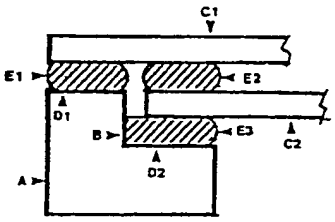
C1
E1
E2
D1
B
E3
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A